

Reproductive Toxicity to Lacewing (Non-guideline)

MRID: 45455006

Chemical Name: Pyraclostrobin

PC Code: 099100

EPA DP Barcode: D418951

Test Material: BAS 500 00F

Purity: Pyraclostrobin (23%)

Citation: Ufer, A. 2000. Effect of BAS 500 00F on the reproduction of the leaf dwelling predator *Chrysoperla carnea* (Neuroptera: Chrysopidae) in an extended laboratory trial. Lab project number: 63751: 2000/1000028. Unpublished study prepared by BASF Aktiengesellschaft.

Study Summary: Lacewings (*Chrysoperla carnea*) were exposed to pyraclostrobin for an extended period of time and the reproductive effects were measured. Lacewings were taken from the BASF Agricultural Center in Zurich. Two- to five-day old adults were directly sprayed with pyraclostrobin at rates of 0.007 and 0.035 lb ai/A; negative controls received tap water and positive controls received dimethoate (0.35 lb ai/A). There were four replicates per group, except for the positive control, which only had two replicates. Each replicate contained 5 female lacewings and 3 males. Each lacewing was placed in a glass jar (≥ 1 L) after being sprayed with water, pyraclostrobin, or dimethoate. Water and food were provided over the course of the study. Mortality was checked on a regular basis during the pre-oviposition period. After egg-laying began, the total number of eggs laid during a 24-hour time period was assessed twice per week for 2.5 weeks (total of 5 assessment points). Mortality was also quantified during these assessments. The eggs were collected and stored until hatching was complete, thereby determining the number of fertile eggs produced per female.

There were no statistically significant differences for mortality, number of eggs laid per female, or hatching rate between the negative control and either of the pyraclostrobin treatment groups (Table 1).

Table 1. Reproductive effects of pyraclostrobin directly sprayed to lacewings

| Endpoint | Negative Control | Pyraclostrobin | | Positive Control: Dimethoate |
|------------------------------------------------------------------|------------------|----------------|---------------|------------------------------|
| | | 0.007 lb ai/A | 0.035 lb ai/A | 0.35 lb ai/A |
| Mortality (percent) | 6.3 | 0 | 3.1 | 100 |
| Reproduction (average number of fertile eggs per female per day) | 19.6 | 21.3 | 18.3 | N/A |
| Hatching rate (percent) | 88.42 | 89.33 | 72.75 | N/A |


N/A – all of the individuals in the positive control group died before the onset of egg-laying, thus it was not possible to measure reproductive effects

Classification: Supplemental because the non-guideline study does not fulfill a data requirement.

Reviewer Comments:

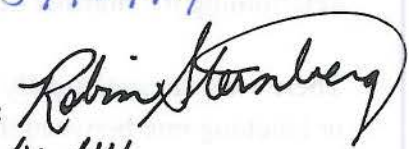
- This study was conducted according to Good Laboratory Practices (OECD) and EG Directive 91/414/EEC.
- The study is scientifically valid.
- This study is useful for qualitative purposes and demonstrates no reproductive effects on lacewings exposed to pyraclostrobin at application rates of 0.007 and 0.035 lb ai/A.

Primary Reviewer: Meghan Radtke, Ph.D.
Biologist, USEPA/EFED/ERB-1

Signature: 

Date: 5/16/14

Secondary Reviewer: Robin Sternberg
Wildlife Biologist, USEPA/EFED/ERB-1

Signature: 

Date: 5/16/14